MAJOR SOURCE OPERATING PERMIT

Permittee: **Hilcorp Energy Company**

Facility Name: **Hatter's Pond Gas Production, Treating, & Processing Facility**

Facility No.: 503-4004

Location: 1340 Radcliff Road, Creola, Mobile Co., Alabama

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol. and 2007 Cum. Supp.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit*

Issuance Date: *DRAFT*
Effective Date: *DRAFT*
Expiration Date: *DRAFT*

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General Permit Provisos

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1. Transfer	
This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.	Rule 335-3-16-.02(6)
2. Renewals	
An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit.	Rule 335-3-16-.12(2)
The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.	
3. Severability Clause	
The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.	Rule 335-3-16-.05(e)
4. Compliance	
(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.	Rule 335-3-16-.05(f)
(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.	Rule 335-3-16-.05(g)

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5. Termination for Cause	
This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.	Rule 335-3-16-.05(h)
6. Property Rights	
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.	Rule 335-3-16-.05(i)
7. Submission of Information	
The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.	Rule 335-3-16-.05(j)
8. Economic Incentives, Marketable Permits, and Emissions Trading	
No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.	Rule 335-3-16-.05(k)
9. Certification of Truth, Accuracy, and Completeness:	
Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.	Rule 335-3-16-.07(a)
10. Inspection and Entry	
Upon presentation of credentials and other documents as may be required by law, the permittee shall allow	Rule 335-3-16-.07(b)

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authorized representatives of the Alabama Department of Environmental Management and EPA to conduct the following:	
(a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit;	
(b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit;	
(c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit;	
(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.	
11. <u>Compliance Provisions</u>	
(a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance.	Rule 335-3-16-.07(c)
(b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.	
12. <u>Compliance Certification</u>	
A compliance certification shall be submitted annually within 60 days of the effective date of this permit.	Rule 335-3-16-.07(e)
(a) The compliance certification shall include the following:	
(1) The identification of each term or condition of this permit that is the basis of the certification;	
(2) The compliance status;	

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(3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements); (4) Whether compliance has been continuous or intermittent; (5) Such other facts as the Department may require to determine the compliance status of the source; (b) The compliance certification shall be submitted to: Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463 and to: Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303	
13. <u>Reopening for Cause</u> Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit: (a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire. (b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.	Rule 335-3-16-.13(5)

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(c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.	
(d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.	
14. <u>Additional Rules and Regulations</u>	
This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.	§22-28-16(d), Code of Alabama 1975, as amended
15. <u>Equipment Maintenance or Breakdown</u>	
(a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:	Rule 335-3-1-.07(1) Rule 335-3-1-.07(2)
(1) Identification of the specific facility to be taken out of service as well as its location and permit number;	
(2) The expected length of time that the air pollution control equipment will be out of service;	
(3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period;	
(4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period;	
(5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.	

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(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.	
16. Operation of Capture and Control Devices	
All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.	§22-28-16(d), Code of Alabama 1975, as amended
17. Obnoxious Odors	
This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.	Rule 335-3-1-.08
18. Fugitive Dust	
(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.	Rule 335-3-4-.02
(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:	
(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;	

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(2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; (3) By paving; and (4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions. (c) Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.	
19. Additions and Revisions Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14.	Rule 335-3-16-.13 Rule 335-3-16-.14
20. Recordkeeping Requirements (a) Records of required monitoring information of the source shall include the following: (1) The date, place, and time of all sampling or measurements; (2) The date analyses were performed; (3) The company or entity that performed the analyses; (4) The analytical techniques or methods used; (5) The results of all analyses; and (6) The operating conditions that existed at the time of sampling or measurement.	Rule 335-3-16-.05(c)2.

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(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.	
21. <u>Reporting Requirements</u>	
(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).	Rule 335-3-16-.05(c)3.
(b) Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.	
22. <u>Emission Testing Requirements</u>	
(a) Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.	Rule 335-3-1-.04(1) Rule 335-3-1-.05(3)
(b) The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.	
(c) To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:	

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(1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.	
(2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning).	
(3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control or influence the operations, and the rated capacity.	
(4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.	
(d) A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.	
(e) All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.	
23. <u>Payment of Emission Fees</u>	
Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code r. 335-1-7-.04.	Rule 335-1-7-.04
24. <u>Other Reporting and Testing Requirements</u>	
Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.	Rule 335-3-1-.04(1)

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25. Title VI Requirements (Refrigerants)	
Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR part 82, subpart A, appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR part 82, subpart F.	40 CFR part 82
No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR part 82, subpart F.	
The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required.	
26. Chemical Accidental Prevention Provisions	
If a chemical listed in Table 1 of 40 CFR 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then:	40 CFR part 68
(a) The owner or operator shall comply with the provisions in 40 CFR part 68.	
(b) The owner or operator shall submit one of the following:	
(1) A compliance schedule for meeting the requirements of 40 CFR part 68 by the date provided in 40 CFR 68.10(a) or,	
(2) A certification statement that the source is in compliance with all requirements of 40 CFR part 68, including the registration and submission of the Risk Management Plan.	
27. Display of Permit	
This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.	Rule 335-3-14-.01(1)(d)

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28. Circumvention	
No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.	Rule 335-3-1-.10
29. Visible Emissions	
Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR part 60, appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.	Rule 335-3-4-.01(1)
30. Fuel-Burning Equipment	
(a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.03.	Rule 335-3-4-.03
(b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Rule 335-3-5-.01.	Rule 335-3-5-.01
31. Process Industries – General	
Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.04.	Rule 335-3-4-.04
32. Averaging Time for Emission Limits	
Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.	Rule 335-3-1-.05

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33. <u>Compliance Assurance Monitoring (CAM)</u> Conditions (a) through (d) that follow are general conditions applicable to emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the unit specific provisos and the attached CAM appendices.	
(a) Operation of Approved Monitoring	40 CFR 64.7
(1) *Commencement of operation*. The owner or operator shall conduct the monitoring required under this section and detailed in the unit specific provisos and CAM appendix of this permit (if required) upon issuance of the permit, or by such later date specified in the permit pursuant to §64.6(d).	
(2) *Proper maintenance*. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.	
(3) *Continued operation*. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor	

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maintenance or careless operation are not malfunctions. (4) *Response to excursions or exceedances*. (i) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. (ii) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.	

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(5) *Documentation of need for improved monitoring*. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Department and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.	
(b) Quality Improvement Plan (QIP) Requirements	40 CFR 64.8
(1) Based on the results of a determination made under Section 33(a)(4)(b) above, the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with 40 CFR §64.6(c)(3), the permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.	
(2) Elements of a QIP:	
(i) The owner or operator shall maintain a written QIP, if required, and have it available for inspection.	

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(ii) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

(I) Improved preventive maintenance practices.

(II) Process operation changes.

(III) Appropriate improvements to control methods.

(IV) Other steps appropriate to correct control performance.

(V) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (2)(b)(i) through (iv) above).

(3) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(4) Following implementation of a QIP, upon any subsequent determination pursuant to Section 33(a)(4)(b) above, the Department may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

(i) Failed to address the cause of the control device performance problems; or

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(ii) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.	
(5) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.	
(c) Reporting and Recordkeeping Requirements	40 CFR 64.9
(1) General reporting requirements	
(i) On and after the date specified in Section 33(a)(1) above by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with ADEM Admin. Code r. 335-3-16-.05(c)3.	
(ii) A report for monitoring under this part shall include, at a minimum, the information required under ADEM Admin. Code r. 335-3-16-.05(c)3. and the following information, as applicable:	
(I) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;	
(II) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor	

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downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(III) A description of the actions taken to implement a QIP during the reporting period as specified in Section 33(b) above. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

(2) General recordkeeping requirements.

(i) The owner or operator shall comply with the recordkeeping requirements specified in ADEM Admin. Code r. 335-3-16-.05(c)2.. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to Section 33(b) above and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(ii) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

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(d) Savings Provisions	40 CFR 64.10
(1) Nothing in this part shall:	
(i) Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.	
(ii) Restrict or abrogate the authority of the Department to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.	
(iii) Restrict or abrogate the authority of the Department to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.	

Summary Page for Process Heaters

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
Heater No. 1	**48 MMBtu/hr** Natural Gas-Fired Heater	SO_2	1.8 lb/MMBtu of heat input	Rule 335-3-5-.01(1)(a)
		PM	0.25 lb/MMBtu of heat input	Rule 335-3-4-.03(1)
		Opacity	No more than one 6 min avg. > 20% AND	Rule 335-3-4-.01(1)(a)
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)
Heater No. 2	**48 MMBtu/hr** Natural Gas-Fired Heater	SO_2	1.8 lb/MMBTU of heat input	Rule 335-3-5-.01(1)(a)
		PM	0.25 lb/MMBtu of heat input	Rule 335-3-4-.03(1)
		Opacity	No more than one 6 min avg. > 20% AND	Rule 335-3-4-.01(1)(a)
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)

Provisos for Process Heaters

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Applicability	
1. Each heating unit is subject to the requirements of ADEM Admin. Code r. 335-3-4-.01, "*Visible Emissions*" for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.01
2. Each heating unit is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.03, "*Fuel Burning Equipment*" for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.03(1)
3. Each process heater is subject to the requirements of ADEM Admin. Code r. 335-3-5-.01, "*Fuel Combustion*" for Control of Sulfur Compound Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-5-.01(1)(a)
4. Each heating unit is subject to the requirements of ADEM Admin. Code r. 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
Emissions Standards	
1. Each process heater shall meet the following opacity standards:	
(a) Except for one 6-minute period during any 60-minute period, the heaters shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the heaters discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. The process heaters shall adhere to the following emission standards:	
(a) Sulfur dioxide (SO_2) emissions shall not exceed 1.8 pounds per million Btu (lb/MMBtu) of heat input.	Rule 335-3-5-.01(1)(a)
(b) Particulate matter (PM) emissions shall not exceed 0.25 lb/MMBtu of heat input.	Rule 335-3-4-.03(1)

Provisos for Process Heaters

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Compliance and Performance Test Methods and Procedures	
1. Compliance with the opacity standards shall be determined using Method 9 or Method 22 of 40 CFR part 60, appendix A.	Rule 335-3-4-.01(2)
2. The fuel gas shall be tested according to the following methods and procedures: (a) Each sample shall be analyzed for its Btu content by utilizing the ASTM Analysis Method D1826-77 or equivalent method. [Fuel Gas Heat Content (BTU/Scf)] (b) Each sample collected shall be analyzed for its hydrogen sulfide (H_2S) content utilizing the Tutwiler procedures found in 40 CFR 60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacturer. [Fuel Gas H_2S (ppmv)]	Rule 335-3-1-.05
3. To demonstrate compliance with the PM emission limit, the heaters shall only burn natural gas.	Rule 335-3-4-.03(1)
Emission Monitoring	
1. Except during times that the production facility is not manned by operation personnel or when the heaters are not being operated, opacity monitoring as specified in Appendix D, *"Opacity Monitoring for Units Subject to State Rules"* of this permit shall be utilized for the process heaters.	Rule 335-3-1-.04 Rule 335-3-4-.01(2)
2. The fuel gas shall be tested for its Btu heat content and H_2S content in accordance to the following requirements: (a) Testing shall occur at a frequency of no less than once every six (6) months. (b) The fuel gas shall be determined from samples that are representative of the fuel gas being consumed. (c) The frequency of analysis may be modified upon receiving Departmental approval.	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.

Provisos for Process Heaters

Federally Enforceable Provisos	Regulations
Recordkeeping and Reporting Requirements	
1. A monthly record of the following shall be maintained:	Rule 335-3-1-.04(1) Rule 335-3-16-.05(c)2.
(a) Facility fuel:	
(1) Btu content [Fuel Btu Content (Btu/Scf)]	
(2) Hydrogen sulfide content [Fuel H_2S (ppmv)]	
(b) Lbs SO_2/MMBtu = $\frac{[\text{Fuel } H_2S \text{ (ppmv)}] \text{ X } [0.1684 \text{ Lbs } SO_2/\text{Scf}]}{\text{Fuel Btu Content (Btu/Scf)}}$	
2. For the purpose of demonstrating compliance with proviso 21(a) of the *general provisos* subpart of this permit, a Periodic Monitoring Report (PMR) meeting the following requirements shall be submitted to the Department:	Rule 335-3-16-.05(c)3.(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any instance in which emission limits, emission standards, and/or work practices were not complied with, as indicated by observations, data collection, and monitoring specified in this permit.	
(2) For each deviation event, the following information shall be submitted:	
(i) Emission source description	
(ii) Permit requirement	
(iii) Date	
(iv) Starting time	
(v) Duration	
(vi) Actual quantity	

Federally Enforceable Provisos	Regulations
(vii) Cause (viii) Action taken to return to compliance (ix) Total operating hours of the affected source during the reporting period (x) Total hours of deviation events during the reporting period (xi) Total hours of deviation events that occurred during startups, shut downs, and malfunctions during the reporting period (b) If during the reporting period no deviation events occurred, a statement that indicates there were no deviations from the permit requirements shall be included in the report. (c) The report content and format in proviso 3(a) of this section may be modified upon receipt of Departmental approval. 3. Each report specified in proviso 2 of the *recordkeeping and reporting requirement* section of this subpart of this permit shall be submitted using the following reporting schedule: Reporting Period — Submittal Date January 1st through June 30th — July 31st July 1st through December 31st — January 31st 4. Each deviation from the requirements specified in the *emission standards* section of this subpart, including those that occur during start ups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)3.(ii)

Summary Page for Existing Stationary RICEs

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
(2700CB) East Cooper	2700 HP, 2SLB, SI, Combo Compressor Engine	CO NO_X VOC	9.5 lb/hr 17.8 lb/hr 8.9 lb/hr	Rule 335-3-14-.04 [BACT] Rule 335-3-14-.04 [BACT] Rule 335-3-14-.04 [BACT]
		HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 6) 40 CFR 63 Subpart ZZZZ
(2600IR-A) East Injection	2,600 HP, 4SLB, SI Injection Compressor Engine w/NSCR	CO NO_X VOC	12.6 lb/hr 12.6 lb/hr 6.8 lb/hr	Rule 335-3-14-.04 [BACT] Rule 335-3-14-.04 [BACT] Rule 335-3-14-.04 [BACT]
		HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 8) 40 CFR 63 Subpart ZZZZ
(1626IR-A) North Ingersoll	1,626 HP, 4SRB, SI, Combo Compressor Engines w/NSCR	CO NO_X VOC	15.5 lb/hr 28.1 lb/hr 6.0 lb/hr	Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD]
		HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 11) 40 CFR 63 Subpart ZZZZ
(1626IR-B) South Ingersoll	1,626 HP, 4SRB, SI, Combo Compressor Engines w/NSCR	CO NO_X VOC	15.5 lb/hr 28.1 lb/hr 6.0 lb/hr	Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD]
		HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 11) 40 CFR 63 Subpart ZZZZ
(1665C) Caterpillar	1,665 HP, 4SLB, SI, Inlet Gas Compressor Engine	CO NO_X VOC	22.8 lb/hr 9.1 lb/hr 9.1 lb/hr	Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD]
		HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 8) 40 CFR 63 Subpart ZZZZ

Emission Point	Description	Pollutant	Emission Limit	Regulations
(1642W) Waukesha	1,642 HP, 4SLB, SI, Inlet Gas Inlet Compressor Engine w/NSCR	CO NO_X HAPs	22.8 lb/hr 9.1 lb/hr Work Or Management Practices	Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] §63.6595(a) §63.6603(a) Table 2d (No. 8) 40 CFR 63 Subpart ZZZZ
(660CB-A) North Cooper **AND** **(660CB-B) South Cooper**	(2) 660 HP, 2SLB, SI, Inlet Compressor Engines	HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 6) 40 CFR 63 Subpart ZZZZ
(377C) Lift Gas Engine	377 HP, 4SLB, SI, Lift Gas Engine w/NSCR	CO NO_X VOC HAPs	2.6 lb/hr 1.5 lb/hr 1.0 lb/hr Work Or Management Practices	Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] Rule 335-3-14-.04 [Anti-PSD] §63.6595(a) §63.6603(a) Table 2d (No. 7) 40 CFR 63 Subpart ZZZZ
Caterpillar Backup Fire Water Pump **AND** **Ingersoll Rand Air Compressor Engine**	91 HP, CI, Fire Pump Driver Engine 111 HP, CI, Air Compressor Engine	HAPs	Work Or Management Practices	§63.6595(a) §63.6603(a) Table 2d (No. 1) 40 CFR 63 Subpart ZZZZ
	ALL ENGINES	Opacity	No more than one 6 min avg. > 20% AND	Rule 335-3-4-.01(1)(a)
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos		Regulations
Applicability		
1.	Each existing engine is subject to the requirements of ADEM Admin. Code r. 335-3-4-.01, "*Visible Emissions*" for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.01
2.	Engine Nos. 2700CB and 2600IR-A are subject to ADEM Admin. Code r. 335-3-14-.04, "*Prevention of Significant Deterioration (PSD) Permitting."*	Rule 335-3-14-.04 [PSD/BACT Limits]
3.	Engines Nos. 1626IR-A, 1626IR-B, 1665C, 1642W, and 337C have enforceable limits in place in order to avoid a review under the Prevention of Significant Deterioration (PSD) regulations.	Rule 335-3-14-.04 [Anti-PSD Limits]
4.	Each existing engine is subject to the requirements of ADEM Admin. Code r. 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
5.	The existing engines are located at a facility with facility-wide emission limits which allow them to be an area source of Hazardous Air Pollutants (HAPs).	40 CFR 63.6585(c)
6.	Each existing engine is subject to the area source requirements of 40 CFR part 60, subpart ZZZZ, "*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)"* and the requirements specified in this subpart of this permit.	40 CFR 63.6585(c) 40 CFR 63.6590(a)(1)(iii)
7.	Each existing engine is subject to the requirements of 40 CFR part 63, subpart A "*General Provisions*" as specified in §63.6665 and Table 8 of subpart ZZZZ.	40 CFR 63.6665 Table 8 of subpart ZZZZ
8.	Engine Nos. 2600IR-A, 1626IR-A, 1626IR-B, and 1642W are subject to 40 CFR part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of the permit.	40 CFR part 64

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
Emission Standards	
1. Each existing engine shall meet the following opacity standards:	
(a) Except for one 6-minute period during any 60-minute period, the engines shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the engines discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. The 2700CB engine shall comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 9.5 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 17.8 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(c) Volatile organic compound (VOC) emissions shall not exceed 8.9 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(d) The work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 2(d)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 6)
(1) Change oil and filter every 4,320 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j));	
AND	
(2) Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
AND	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(3) Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
3. The 2600IR-A engine shall comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 12.6 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 12.6 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(c) Volatile organic compound (VOC) emissions shall not exceed 6.8 Lbs/Hour.	Rule 335-3-14-.04 [PSD BACT Limit]
(d) The work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 3(d)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 8)
(1) Change oil and filter every 2,160 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j));	
AND	
(2) Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary;	
AND	
(3) Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
4. The 1626IR-A and 1626IR-B engines shall each comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 15.5 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 28.1 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(c) Volatile organic compound (VOC) emissions shall not exceed 6.0 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(d) The work practice standards found in Table 2d of subpart ZZZZ and as follows in proviso 4(d)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 11)
(1) Change oil and filter every 2,160 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j));	
AND	
(2) Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary;	
AND	
(3) Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
5. The 1665C engine shall comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 22.8 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 9.1 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(c) Volatile organic compound (VOC) emissions shall not exceed 9.1 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(d) The work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 5(d)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 8)

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(1) Change oil and filter every 2,160 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j)); AND (2) Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; AND (3) Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
6. The 1642W engine shall comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 22.8 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 9.1 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(c) The work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 6(c)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 8)
(1) Change oil and filter every 2,160 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j)); AND (2) Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; AND (3) Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
7. The 660CB-A and 660CB-B engines shall each comply with the work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 7(a) through (c):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 6)
(a) Change oil and filter every 4,320 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j));	
AND	
(b) Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
AND	
(c) Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
8. The 377C engine shall comply with the following limitations:	
(a) Carbon monoxide (CO) emissions shall not exceed 2.6 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(b) Nitrogen oxide (NO_X) emissions shall not exceed 1.5 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(c) Volatile organic compound (VOC) emissions shall not exceed 1.0 Lbs/Hour.	Rule 335-3-14-.04 [Anti-PSD Limit]
(d) The work practice standards found in Table 2d of subpart ZZZZ and as follows in proviso 8(d)(1) through (3):	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 7)
(1) Change oil and filter every 1,440 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j));	
AND	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(2) Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; AND (3) Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
9. The 91 HP fire water pump engine and the 111 HP air compressor engine shall each comply with the work practice standards found in Table 2d of subpart ZZZZ and as follows in provisos 9(a) through (c): (a) Change oil and filter every 1,000 hours of operation or annually, whichever comes first (you have the option of utilizing an oil analysis program in order to extend the specified oil change requirements as specified in 40 CFR 63.6625(j)); AND (b) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; AND (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	§63.6603(a) 40 CFR 63 Subpart ZZZZ Table 2d (No. 1)
Compliance and Performance Test Methods and Procedures	
1. Compliance with the opacity standards shall be determined using Method 9 or Method 22 of 40 CFR part 60, appendix A.	Rule 335-3-4-.01(2)
2. To demonstrate compliance with the applicable CO, NO_X, and VOC emission limits, the 2700CB, 2600IR-A, 1626IR-A, 1626IR-B, 1665C, and 1642W engines shall be tested in accordance with the following requirements: (a) CO testing for each engine shall be conducted according to the requirements of Method 10 or 10A or 10B of 40 CFR part 60, appendix A, or other methodology approved by the Department.	Rule 335-3-1-.05 Rule 335-3-14-.04 Rule 335-3-16-.05(c)1.(i)

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(b) NO_X testing for each engine shall be conducted according to the requirements of Method 7 or 7A or 7B or 7C or 7D or 7E of 40 CFR part 60, appendix A, or other methodology approved by the Department.	
(c) VOC testing for each engine shall be conducted according to the requirements of Method 18 or 25 or 25A or 25B or 25C or 25D or 25E of 40 CFR part 60, appendix A, or other methodology approved by the Department.	
OR	
(d) EPA's Conditional Test Method (CTM-034) and Methods 18 & 19 of 40 CFR 60.	
3. The engine fuel gas shall be tested for its Btu and hydrogen sulfide (H_2S) content in accordance with the following requirements:	Rule 335-3-1-.05 Rule 335-3-16-.05(c)1.(i)
(a) Each sample shall be analyzed for its Btu content by utilizing the ASTM Analysis Method D1826-77 or an equivalent method. [Fuel Gas Heat Content (Btu/Scf)]	
(b) Each sample collected shall be analyzed for it hydrogen sulfide content utilizing the Tutwiler procedures found in 40 CFR §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacturer. [Fuel Gas H_2S (ppmv)]	
Emission Monitoring	
1. Except during times that the production facility is not manned by operation personnel or when the engines are not being operated, opacity monitoring as specified in Appendix D, *"Opacity Monitoring for Units Subject to State Rules"* of this permit shall be utilized for the engines.	Rule 335-3-1-.04 Rule 335-3-4-.01(2)
2. To demonstrate compliance with the applicable NO_X, CO, and VOC emissions limits, the following performance testing requirements shall be complied with:	Rule 335-3-16-.05(c)1.

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations

(a) Except as specified in provisos 2(d) and (e) of this section of this subpart, the following testing frequency shall be adhered to over a five year cycle:

(1) At least once every five years, a periodic performance test shall be conducted on each engine according to the requirements specified in provisos 2(a) through (c) of the *compliance and performance test methods and procedures section* of this subpart.

(2) At least once every twelve months in between the five year periodic performance test specified in proviso 2(a)(1) of this section of this subpart, an annual monitoring test shall be conducted on each engine according to one of the following requirements:

(i) The requirements outlined in provisos 2(a) through (c) of the *compliance and performance test methods and procedures section* of this subpart;

OR

(ii) The requirements outlined in proviso 2(d) of the *compliance and performance test methods and procedures section* of this subpart.

(b) The emission factor for each engine in pounds per million Btu shall be determined during the above test.

[Test EF (Lbs/MMBTU)]

(c) For redundant and/or similar units, the facility may request permission to test a statistical sampling of the units.

(d) If the total operating hours for any unit subject to an annual monitoring test as outlined in proviso 2(a)(2) of this section of this subpart are less than 500 hours over a consecutive 12-month period, then the facility may request a waiver from the required annual monitoring test.

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(e) The 660CB-A, 660CB-B, 377C, backup fire water pump engine, and air compressor engine are exempt from the periodic and annual performance tests required under proviso 2(a) of this section of this subpart.	
(f) The testing frequency may be modified upon receipt of Departmental approval.	
3. The engine fuel gas shall be tested for its Btu heat content and H_2S content in accordance to the following requirements:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.
(a) The fuel gas monitor shall be located immediately upstream of the engine.	
(b) Btu and H_2S content testing shall occur at a frequency of no less than once every six (6) months.	
(c) The fuel gas Btu and H_2S content shall be determined from samples that are representative of the fuel gas being consumed.	
(d) The frequency of testing may be modified upon receiving Departmental approval.	
4. When possible and practicable, a continuous metering system shall be utilized that is capable of continuously monitoring and recording the fuel gas flow rate to each engine.	Rule 335-3-1-.04
(a) The continuous measurement may be made with a single meter through which all of the fuel gas for identical make and model engines flow.	
(1) Calibration, maintenance and operation of metering system shall be performed in accordance to manufacturer's specification.	
(b) Volumetric flow of fuel gas streams that are not continuously measured shall be accounted for by utilizing special estimating methods (i.e. engineer estimates, material balance, computer simulation, special testing etc.).	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
5. Monitoring meeting the requirements specified in Appendix A "*Monitoring for Engines with Catalytic Converters*" of this permit shall also be utilized for each engine equipped with a catalytic converter.	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.(ii) §64.6(b) & (c)
(a) The monitored parameter may be changed only upon Departmental approval.	
(b) Provided an exceedance and/or deviation occurs, the owner or operator of the facility shall comply with the requirements specified in §64.7(d).	§64.7(d)
(c) Compliance shall be demonstrated by meeting the requirements specified in §64.7(d)(2) and provisos 4 of the *recordkeeping and reporting* section of this subpart.	§64.7(d)(2)
6. Continuous compliance with the requirements of 40 CFR part 63, subpart ZZZZ shall be demonstrated by meeting one of the following requirements:	§63.6640(a) 40 CFR 63 Subpart ZZZZ Table 6 (No. 9)
(a) Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions.	
(b) Developing and following your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	
7. At all times an affected source must be operated and maintained, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	§63.6605(b)
8. Each engine's time spent at idle during startup shall be minimized and the engine's startup time shall be minimized to a period needed for appropriate and safe loading of the engine as specified in §63.6625(h).	§63.6625(h)
9. The remote status of the 2700CB, 2600IR-A, 1626IR-A, 1626IR-B, 1665C, and 1642W engines shall be reevaluated annually.	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(a) If the evaluation indicates that the engine(s) no longer meet the definition of remote stationary RICE in §63.775, the engine(s) must comply with the applicable requirements in subpart ZZZZ for engines that are not remote within 1 year of the evaluation.	§63.6603(f)
Recordkeeping and Reporting Requirements	
1. A monthly record of the following information shall be maintained and made available for inspection for each engine for a period of five (5) years:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)2.
(a) Engine emissions:	
(1) Engine fuel consumption [Engine Fuel (MScf/Month)]	
(2) Fuel gas heat content [Fuel Heat Content (Btu/Scf)]	
(3) Fuel gas hydrogen sulfide content [Fuel H_2S (ppmv)]	
(4) Engine Fuel (MMBtu/Month) = $\frac{\text{[Engine Fuel (MScf/Month)] X [Fuel Heat Content (Btu/Scf)]}}{1{,}000}$	
(5) Engine operating hours [Hours/Month]	
(6) NO_X, CO, & VOC emissions shall be determined as follows for each pollutant:	
(i) Emissions [lb/Month] = [Engine Fuel (MMBtu/Month)] X [Test EF(lb/MMBtu)] *Where the test emissions factor shall be equal to the most recent engine tests results for NO_X, CO, & VOC, or AP-42 values, or other approved sources.*	
(ii) Emissions [lb/Hour] = $\frac{\text{Emissions [lb/Month]}}{\text{Engine operating hours [Hours/Month]}}$	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(b) Date and type of engine maintenance that affects air emissions.	
(c) Results of each daily visual inspection	
(d) Results of each occurrence when a visible emission observation was conducted on each engine	
(e) The frequency of the calculations may be modified upon Departmental approval.	
2. The following records shall be maintained and kept to demonstrate compliance with the requirements of 40 CFR part 63, subpart ZZZZ:	
(a) Records required in Table 6 of 40 CFR part 63, subpart ZZZZ to demonstrate continuous compliance	§63.6655(d)
(b) Maintenance records as specified in §63.6655(e) shall be maintained for engine.	§63.6655(e)(3)
(c) A copy of the initial and annual evaluations of the remote status of the 2700CB, 2600IR-A, 1626IR-A, 1626IR-B, 1665C, and 1642W engines	§63.6603(f)
(d) Each record shall be kept in a form suitable and readily available for expeditious review according to §63.10(b)(1)	§63.6660(a)
(e) Each record shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record	§63.6660(b)
(f) Each record shall be readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record	§63.6660(c)
3. For the purpose of demonstrating compliance with proviso 21(a) of the *general provisos* subpart of this permit, a Periodic Monitoring Report (PMR) meeting the following requirements shall be submitted to the Department:	Rule 335-3-16-.05(c)3.(i)

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions. (1) A deviation shall mean any instance in which emission limits, emission standards, and/or work practices were not complied with, as indicated by observations, data collection, and monitoring specified in this permit. (2) For each deviation event, the following information shall be submitted: (i) Emission source description (ii) Permit requirement (iii) Date (iv) Starting time (v) Duration (vi) Actual quantity (vii) Cause (viii) Action taken to return to compliance (ix) Total operating hours of the affected source during the reporting period (x) Total hours of deviation events during the reporting period (xi) Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period (b) If during the reporting period no deviation events occurred, a statement that indicates there were no deviations from the permit requirements shall be included in the report.	

Provisos for Existing Stationary RICEs

Federally Enforceable Provisos	Regulations
(c) Each report shall be submitted using the following reporting schedule: Reporting Period — Submittal Date January 1st through June 30th — July 31st July 1st through December 31st — January 31st (d) The report content and format in proviso 3(a) of this section may be modified upon receipt of Departmental approval.	
4. Each deviation from the requirements specified in the *emission standards* section of this subpart, including those that occur during start ups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)3.(ii)

Summary Page for NEW Stationary RICEs

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
(1680W)	1,680 HP, SI, Four Stroke Rich Burn (4SRB) Compressor Engine w/NSCR	NO_X	7.41 lb/hr or 160 ppmvd at 15% O_2	§60.4233(e) Table 1, 40 CFR 60 Subpart JJJJ
		CO	14.82 lb/hr or 540 ppmvd at 15% O_2	§60.4233(e) Table 1, 40 CFR 60 Subpart JJJJ
		VOC	3.71 lb/hr or 86 ppmvd at 15% O_2	§60.4233(e) Table 1, 40 CFR 60 Subpart JJJJ

Permitted Non- Emergency Operating Schedule: 100 Hours/yr [40 CFR 60.4242(d)]†
†Unless otherwise approved

Permitted Emergency Operating Schedule: Unlimited [40 CFR 60.4242(d)]

Emission Point	Description	Pollutant	Emission Limit	Regulations
(42-230A)	230 HP, SI, 4SRB, Liquefied Petroleum Gas (LPG), Emergency Generator Engine w/ NSCR	NO_X	1.18 g/HP-hr (0.599 lb/hr)	§60.4231(c) 40 CFR 60 Subpart JJJJ
		CO	1.56 g/HP-hr (0.791 lb/hr)	§60.4231(c) 40 CFR 60 Subpart JJJJ
		VOC	0.03 g/HP-hr (0.152 lb/hr)	§60.4231(c) 40 CFR 60 Subpart JJJ

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
Applicability	
1. Each engine is subject to the requirements of ADEM Admin. Code r. 335-3-4-.01, "*Visible Emissions*" for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.01
2. Each engine is subject to the requirements of ADEM Admin. Code r. 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
3. Each engine is subject to the applicable requirements of 40 CFR part 60, subpart JJJJ, "*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"* and the requirements specified in this subpart of this permit.	1680W engine 40 CFR 60.4230(a)(4)(i) 42-230A engine 40 CFR 60.4230(a)(4)(iv)
4. Each engine is subject to the applicable requirements of 40 CFR part 60, subpart A, "*General Provisions*" as specified in §60.4246 and Table 3 of subpart JJJJ.	40 CFR 60.4246 Table 3 of subpart JJJJ
5. The 1680W compressor engine is subject to 40 CFR part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of the permit.	40 CFR part 64
Emission Standards	
1. Each engine shall meet the following opacity standards:	
(a) Except for one 6-minute period during any 60-minute period, the engines shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the engines discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. The 42-230A engine shall meet the following emission standards in order to demonstrate compliance with subpart JJJJ:	§60.4233(c) 40 CFR part 1048

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(a) Nitrogen oxide (NO_X) emissions shall not exceed 1.18 g/HP-hr (0.599 lb/hr).	
(b) Carbon monoxide (CO) emissions shall not exceed 1.56 g/HP-hr (0.791 lb/hr).	
(c) Volatile organic compound (VOC) emissions shall not exceed 0.03 g/HP-hr (0.152 lb/hr).	
(d) This engine shall burn liquefied petroleum (LPG) as its fuel source unless otherwise approved by the Department.	
(e) This engine shall be equipped with a catalytic converter.	
3. The 1680W engine shall meet the following emission limitations in order to demonstrate compliance with subpart JJJJ:	§60.4233(e) Table 1 40 CFR 60 Subpart JJJJ
(a) Nitrogen oxide (NO_X) emissions shall not exceed 2.0 g/HP-hr (7.41 lb/hr) or 160 ppmvd at 15% O_2.	
(b) Carbon monoxide (CO) emissions shall not exceed 4.0 g/HP-hr (14.82 lb/hr) or 540 ppmvd at 15% O_2.	
(c) Volatile organic compound (VOC) emissions shall not exceed 1.0 g/HP-hr (3.71 lb/hr) or 86 ppmvd at 15% O_2.	
(d) The 1680W engine shall be equipped with a catalytic converter.	
4. Each engine must be operated and maintained to achieve the emissions standards under subpart JJJJ for the entire life of the engine.	§60.4234
Compliance and Performance Test Methods and Procedures	
1. Compliance with the opacity standards shall be determined using Method 9 or Method 22 of 40 CFR part 60, appendix A.	Rule 335-3-4-.01(2)
2. To demonstrate compliance with the applicable requirements of subpart JJJJ, performance testing meeting the following methods and procedures shall be performed on the 1680W engine:	§60.4243(b)(2)(ii) §60.4244

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(a) NO_X emissions shall be determined as specified in §60.4244(d) and Table 2 of subpart JJJJ and as follows in this section of this subpart:	60.4244(d) Table 2 of subpart JJJJ
(1) Method 1 or 1A of 40 CFR part 60, appendix A or other approved methods specified in Table 2 if measuring flow rate	
(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) or other approved methods specified in Table 2	
(3) If it is necessary to determine the exhaust flow rate of the engine exhaust, Method 2 or 2C or 19 of 40 CFR part 60, appendix A	
(4) If it is necessary to measure the moisture content of the engine exhaust, Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A)	
(5) Method 7E of 40 CFR part 60, appendix A, ASTM Method D6522-00(2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A) or other approved methods specified in Table 2.	
(b) CO emissions shall be determined as specified in §60.4244(e) and Table 2 of subpart JJJJ and as follows in this section of this subpart:	60.4244(e) Table 2 of subpart JJJJ
(1) Method 1 or 1A of 40 CFR part 60, appendix A or other approved methods specified in Table 2 if measuring flow rate	
(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) or other approved methods specified in Table 2	
(3) If it is necessary to determine the exhaust flow rate of the engine exhaust, Method 2 or 2C or 19 of 40 CFR part 60, appendix A	

Federally Enforceable Provisos			Regulations
	(4)	If it is necessary to measure the moisture content of the engine exhaust, Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A)	
	(5)	Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00(2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A) or other approved methods specified in Table 2	
(c)	VOC emissions shall be determined as specified in §60.4244(f)-(g) and Table 2 of subpart JJJJ and as follows in this section of this subpart:		60.4244(f) 60.4244(g) Table 2 of subpart JJJJ
	(1)	Method 1 or 1A of 40 CFR part 60, appendix A or other approved methods specified in Table 2 if measuring flow rate	
	(2)	Method 3, 3A, or 3B of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) or other approved methods specified in Table 2	
	(3)	If it is necessary to determine the exhaust flow rate of the engine exhaust, Method 2 or 2C or 19 of 40 CFR part 60, appendix A	
	(4)	If it is necessary to measure the moisture content of the engine exhaust, Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A)	
	(5)	Method 18 and 25A (with the use of a methane cutter as described in §1065.265) of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17 of 40 CFR part 60, appendix A) or other approved methods specified in Table 2	

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(6) Provided that Method 18 of 40 CFR part 60, appendix A or Method 320 of 40 CFR 63 is used to measure VOC emissions, emissions can be corrected using the equation found in §60.4244(g)	
3. The engine fuel gas shall be tested for its Btu and hydrogen sulfide (H_2S) content in accordance with the following requirements:	Rule 335-3-1-.05 Rule 335-3-16-.05(c)1.(i)
(a) Each sample shall be analyzed for its Btu content by utilizing the ASTM Analysis Method D1826-77 or equivalent method. [Fuel Gas Heat Content (Btu/Scf)]	
(b) Each sample collected shall be analyzed for it H_2S content utilizing the Tutwiler procedures found in 40 CFR §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacturer. [Fuel Gas H_2S (ppmv)]	
Emission Monitoring	
1. Except during times that the production facility is not manned by operation personnel or when the engines are not being operated, opacity monitoring as specified in Appendix D, "*Opacity Monitoring for Units Subject to State Rules*" of this permit shall be utilized for the engines.	Rule 335-3-1-.04 Rule 335-3-4-.01(2)
2. The engine fuel gas shall be tested for its Btu heat content and H_2S content in accordance to the following requirements:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.
(a) The fuel gas monitor shall be located immediately upstream of the engine.	
(b) Btu and H_2S content testing shall occur at a frequency of no less than once every six (6) months.	
(c) The fuel gas Btu and H_2S content shall be determined from samples that are representative of the fuel gas being consumed.	
(d) The frequency of testing may be modified upon receiving Departmental approval.	

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
3. When possible and practicable, a continuous metering system shall be utilized that is capable of continuously monitoring and recording the fuel gas flow rate to each engine.	Rule 335-3-1-.04
(a) The continuous measurement may be made with a single meter through which all of the fuel gas for identical make and model engines flow.	
(1) Calibration, maintenance and operation of metering system shall be performed in accordance to manufacturer's specification.	
(b) Volumetric flow of fuel gas streams that are not continuously measured shall be accounted for by utilizing special estimating methods (i.e. engineer estimates, material balance, computer simulation, special testing etc.).	
4. To demonstrate compliance with the applicable requirements of subpart JJJJ, the 1680W engine shall meet the following requirements:	§60.4243(b)(2)(ii)
(a) Keep a maintenance plan and records of conducted maintenance	
(b) To the extent practicable, the engine must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions	
(c) Performance testing must be conducted on the engine as specified in §60.4244 and as follows:	§60.4244
(1) Tests must be conducted to meet the load requirements specified in §60.4244(a) and according to the requirements in §60.8 of 40 CFR part 60, appendix A, and Table 2 of subpart JJJJ.	§60.4244(a) Table 2 of subpart JJJJ §60.8
(2) Tests must not be conducted during periods of startup, shutdown, or malfunction as specified in §60.4244(b).	§60.4244(b)
(i) Provided that the engine is non-operational:	

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(I) You are not required to startup the engine for the sole purpose of performing a performance test.	
(II) Immediately upon startup of the engine a performance test must be performed.	
(3) Three separate test runs must be conducted for each performance test and each run must last at least 1 hour as specified in §60.4244(c) and §60.8(f) of 40 CFR part 60, appendix A.	§60.4244(c) §60.8
(d) Performance testing shall be conducted every 8,760 hours or 3 years, whichever comes first.	§60.4243(b)(2)(ii)
(e) Within 30 days after completion of performance testing, the facility shall submit a copy of each performance test to the Department.	Rule 335-3-1-.04(1) Rule 335-3-1-.05(3)
5. To ensure that the catalyst on the 1680W compressor engine is not defective, the monitoring requirements specified in Appendix A, "*Monitoring for Engines with Catalytic Converters*" of this permit and the following requirements shall be met:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)(1)(ii) §64.6(b)-(c)
(a) The NO_X concentration in the engine exhaust shall be tested using a portable analyzer every 12 months.	
(b) The pressure drop or temperature drop across the catalyst bed shall be monitored weekly.	
(1) The monitored parameter may be changed only upon Departmental approval.	
(c) The air-to-fuel ratio (AFR) controller must be maintained and operated as specified in §60.4243(g)	§60.4243(g)
6. To demonstrate compliance with the applicable requirements of subpart JJJJ, the 42-230A emergency generator engine shall meet the following monitoring requirements:	§60.4243(a)(1) §60.4243(d)
(a) Maintain and operate the certified engine and control device according to manufacturer's emission-related written instructions	

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(b) The applicable requirements specified in 40 CFR part 1068, subpart A through D shall be met.	
(c) A record of maintenance conducted on the certified engine must be maintained.	
(d) The engine may be operated for the purpose of maintenance checks and readiness testing for a period not to exceed 100 hours per year.	
(e) There is no time limit on the use of the engine in emergency situations.	
(f) The engine may operate up to 50 hours per year in non-emergency situations.	
(1) The 50 hours for non-emergency situations shall count towards the 100 hours allowed for maintenance checks and readiness.	
(2) The 50 hours for non-emergency situations shall not be used for peak shaving or generating income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.	
(g) Any operation of the emergency generator engine other than for emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited.	
Record Keeping and Reporting Requirements	
1. The following records must be maintained to demonstrate compliance with the requirements of 40 CFR part 60, subpart JJJJ for the 42-230A engine:	§60.4245
(a) Records of all notifications submitted to comply with this subpart and all documentation supporting any notification	§60.4245(a)(1)
(b) Records of maintenance conducted on the engine	§60.4245(a)(2)

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(c) Documentation from the manufacturer demonstrating that the engine is certified to meet the emissions standards of this subpart and information as required by 40 CFR parts 90, 1048, 1054, and 1060, as applicable	§60.4245(a)(3)
(d) Record of how many hours are spent for emergency operations, including what classified the operation as emergency and how many hours are spend for non-emergency operation	Rule 335-3-16-.05(c)(1)(ii)
2. The following records must be maintained to demonstrate compliance with the requirements of 40 CFR part 60, subpart JJJJ for the 1680W engine:	§60.4245
(a) Records of all notifications submitted to comply with subpart JJJJ and all documentation supporting any notification	§60.4245(a)(1)
(b) Records of maintenance conducted on the engine	§60.4245(a)(2)
(c) Documentation demonstrating that the engine meets the emissions standards of subpart JJJJ	§60.4245(a)(4)
3. The following monthly records shall be maintained for each engine:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)2.
(a) Engine Fuel Consumption [Engine Fuel (MScf/Month)]	
(b) Engine operating hours [Hours/Month]	
(c) NO_X, CO, & VOC emissions shall be determined for each pollutant as follows:	
(i) Engine Emissions [Lbs/hr] =	
$\text{Engine Emissions Rate (g/HP-hr)} \times \text{Engine Rating (HP)} \times [\frac{1\,\text{Lb}}{453.5\,\text{g}}]$	
Where the emission rate in g/HP-hr shall be obtained from the latest performance test performed on the engine	
(ii) Engine Emissions [Tons/Month] =	

Federally Enforceable Provisos	Regulations
Engine Emissions [Lbs/hr] X Engine Op Hours [Hr/Month] X {1 Ton/2,000 Lb}	
(d) Results of each daily visual inspection	
(e) Results of each occurrence when a visible emission observation was conducted on each engine	
4. For the purpose of demonstrating compliance with proviso 21(a) of the *general provisos* subpart of this permit, a Periodic Monitoring Report (PMR) meeting the following requirements shall be submitted to the Department:	Rule 335-3-16-.05(c)3.(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any instance in which emission limits, emission standards, and/or work practices were not complied with, as indicated by observations, data collection, and monitoring specified in this permit.	
(2) For each deviation event, the following information shall be submitted.	
(i) Emission source description	
(ii) Permit requirement	
(iii) Date	
(iv) Starting time	
(v) Duration	
(vi) Actual quantity	
(vii) Cause	
(viii) Action taken to return to compliance	
(ix) Total operating hours of the affected source during the reporting period	

Provisos for New Stationary RICEs

Federally Enforceable Provisos	Regulations
(x) Total hours of deviation events during the reporting period (xi) Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period (b) If during the reporting period no deviation events occurred, a statement that indicates there were no deviations from the permit requirements shall be included in the report. (c) Each report shall be submitted using the following reporting schedule: Reporting Period — Submittal Date January 1st through June 30th — July 31st July 1st through December 31st — January 31st (d) The report content and format in proviso 4(a) of this section may be modified upon receipt of Departmental approval.	
5. Records shall be maintained and available for inspection for a period of five years.	Rule 335-3-16-.05(c)2.(ii)
6. Each deviation from the requirements specified in the *emission standards* section of this subpart, including those that occur during start ups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)3.(ii)

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Summary Page for the Sweetening Unit & Thermal Oxidizer

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
TO	Thermal oxidizer	SO_2	Unlimited (Available Sulfur less than or equal to 5 LTons/day)	Rule 335-3-5-.03(3)
		H_2S	Burn gas with 0.10 grains H_2S/Scf Offsite Concentration less than 20 ppbv	Rule 335-3-5-.03(2)
		Opacity	No more than one 6 min avg. > 20%	Rule 335-3-4-.01(1)(a)
			AND	
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)

Provisos for the Sweetening Unit & Thermal Oxidizer

Federally Enforceable Provisos	Regulations
Applicability	
1. The thermal oxidizer is subject to the requirements of ADEM Admin. Code r. 335-3-4-.01, "*Visible Emissions*" for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.01
2. The thermal oxidizer is subject to the applicable requirements of ADEM Admin. r. 335-3-5-.03, "*Petroleum Production*" for Control of Sulfur Compound Emissions and the requirements specified in this subpart of the permit.	Rule 335-3-5-.03(1)
3. The thermal oxidizer is subject to the requirements of ADEM Admin. Code r. 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
4. The thermal oxidizer is subject to 40 CFR part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of the permit.	40 CFR part 64
Emission Standards	
1. The thermal oxidizer shall meet the following opacity standards:	
(a) Except for one 6-minute period during any 60-minute period, the thermal oxidizer shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the thermal oxidizer discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. All process gas containing greater than 0.10 grains of H_2S/scf shall be properly burned in the thermal oxidizer or the flares.	Rule 335-3-5-.03(1)

Provisos for the Sweetening Unit & Thermal Oxidizer

Federally Enforceable Provisos	Regulations
3. Each process gas stream containing more than 0.10 of a grain of hydrogen sulfide (H_2S) per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period.	Rule 335-3-5-.03(2)
(a) Each process gas stream that has to be vented to the atmosphere shall be captured and sent to the thermal oxidizer or to the facility flare for combustion.	
(b) Provided vessels or equipment are being de-pressured and/or emptied and the reduced pressure will not allow flow of the process gas stream to the combustion device, the venting to the atmosphere of any gas stream shall be allowed, but the duration of the venting shall not exceed 15 continuous minutes.	
4. Provided that the available sulfur is less than or equal to 5 long tons per day, there is no limit on sulfur dioxide emissions. A record of SO_2 emissions shall be kept for reporting purposes.	Rule 335-3-5-.03(3)
Compliance and Performance Test Methods and Procedures	
1. Compliance with the opacity standards shall be determined using Method 9 or Method 22 of 40 CFR part 60, appendix A.	Rule 335-3-4-.01(2)
2. Each sour gas stream entering the thermal oxidizer shall be tested for its hydrogen sulfide (H_2S) content utilizing the Tutwiler procedures found in §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacturer. [SG Stream H_2S (Mole %)]	Rule 335-3-1-.05 Rule 335-3-16-.05(c)1.(i)
Emission Monitoring	
1. Except during times that the production facility is not manned by operation personnel or when the thermal oxidizer is not being operated, opacity monitoring as specified in Appendix D, "*Opacity Monitoring for Units Subject to State Rules"* of this permit shall be utilized for the thermal oxidizer.	Rule 335-3-4-.01(2)

Provisos for the Sweetening Unit & Thermal Oxidizer

Federally Enforceable Provisos	Regulations
2. Monitoring meeting the requirements specified in Appendix B *"Monitoring for Thermal Oxidizer"* of this permit shall be utilized for the thermal oxidizer.	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.(i) §64.6(b) & (c)
3. Each sour gas stream entering the thermal oxidizer shall be monitored in accordance to the following requirements:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.
(a) Testing to determine the H_2S content of each process stream shall consist of capturing one representative sample of the stream at a frequency of no less than once each month.	
(1) The frequency of this testing may be modified upon receipt of Department approval.	
(b) *Sour gas (SG)* means any gas with an H_2S content greater than that which is considered to be pipeline quality gas.	
(c) Provided multiple process streams can be sent to the thermal oxidizer and it is possible to capture a common stream whose contents would be representative of all the streams, that common stream may be used instead of the individual process streams.	
Record Keeping and Reporting Requirements	
1. A daily record of the following information shall be maintained and made available for inspection:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)2.
(a) Thermal oxidizer (TO) firebox temperature [Firebox Temp (°F)]	
(b) Volume of sour gas burned in thermal oxidizer [SG Stream Volume Burned (MScf/Day)]	
(c) SG Stream H_2S (Lbs/Day) = [SG Stream Volume Burned (MScf/Day)] X [SG Stream H_2S (Mole %) X [0.8946 Lbs/MScf]	
(d) Thermal oxidizer H_2S (Lbs/Day) = $\sum$ of SG Stream H_2S (Lbs/Day) – $\sum$ of Sulfur Recovery in SRU (Lbs/Day)	

Provisos for the Sweetening Unit & Thermal Oxidizer

Federally Enforceable Provisos	Regulations
(e) Total hours that the thermal oxidizer was operated during the day. [TO Hours (Hours/Day)]	
(f) H_2S feed (Lbs/Hour) = $\frac{\text{TO } H_2S \text{ (Lbs/Day)}}{\text{TO Hours (Hours/Day)}}$	
(g) SO_2 emissions (Lbs/Hour) = $\frac{[\text{ TO } H_2S \text{ (Lbs/Hour) }] \text{ X } [\text{ 64 Lbs of } SO_2\text{/ Lb Mole }]}{[\text{ 34 Lbs } H_2S\text{/Lb Mole }]}$	
(h) Available sulfur (LTons/Day) = [TO Stream H_2S (Lbs/Day)] X {1 LTon/2,240 Lbs}	
(i) Results of each daily visual inspection	
(j) Results of each occurrence when a visible emission observation was conducted on the thermal oxidizer	
(k) The date, starting time, and duration of each deviation or exceedance of the requirements along with the cause and corrective actions taken.	§64.9(a)(2)(i)
(l) The date, starting time, and duration of each time the H_2S feed rate exceeded 500 lb/hr, along with the cause and corrective actions taken. This exceedance is defined as a deviation.	
2. A monitoring report meeting the requirements specified in proviso 2(a) and (b) of this section of this subpart shall be submitted to the Department to demonstrate compliance with proviso 21(a) of the *General Provisos* subpart of this permit.	Rule 335-3-16-.05(c)3.(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any condition determined by observation, by data collected by any continuous monitoring system or periodic monitoring required by the permit that can be used to indicate compliance, that identifies an	

Federally Enforceable Provisos	Regulations
affected source may have failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	
(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.	
(b) Provided a continuous monitoring system is not being utilized, a Periodic Monitoring Report (PMR) meeting the requirements specified in the following provisos shall be submitted to the Department.	
(1) Except as provided for in proviso 1(c) of this section of this subpart, the report shall meet the requirements specified in proviso 2(b)(1)(i).	Rule 335-3-16-.05(c)2.
(i) For each deviation event, the following information shall be submitted.	
(I) Emission source description	
(II) Permit requirement	
(III) Date	
(IV) Starting time	
(V) Duration	
(VI) Actual quantity	
(VII) Cause	
(VIII) Action taken to return to compliance	
(IX) Total operating hours of the affected source during the reporting period	
(X) Total hours of deviation events during the reporting period	

Provisos for the Sweetening Unit & Thermal Oxidizer

Federally Enforceable Provisos	Regulations
(XI) Total hours of deviation events that occurred during startups, shut downs, and malfunctions during the reporting period (2) Each PMR shall cover no more than a calendar semi-annual period and shall be submitted according to the following reporting schedule: Reporting Period — Submittal Date January 1st through June 30th — July 31st July 1st through December 31st — January 31st (c) The report content and format in proviso 2(b) of this section of this subpart may be modified upon receipt of Departmental approval.	
3. Each deviation from the *emission standards* section of this subpart, including those that occur during startups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the *General Provisos* subpart of this permit.	Rule 335-3-16-.05(c)3.(ii)

Summary Page for the Facility Flares

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
FF	Main Facility Flare	SO_2	No Limit	Rule 335-3-5-.03(3)
	AND		(Available sulfur less than 5 LTons/day)	
BFF	Back-up Facility Flare			
		H_2S	Burn gas with 0.10 grains H_2S/Scf Offsite Concentration less than 20 ppbv	Rule 335-3-5-.03(2)
		Opacity	No visible emissions except for 5 consecutive minutes in a 2 hour averaging period	40 CFR 60.18(c)(1) 40 CFR 60.633(g) 40 CFR 63.11(b)(4) 40 CFR 63.772(e)(2)

Provisos for the Facility Flares

Federally Enforceable Provisos		Regulations
Applicability		
1.	The flares are subject to the applicable requirements of ADEM Admin. r. 335-3-5-.03, "*Petroleum Production*" for Control of Sulfur Compound Emissions and the requirements specified in this subpart of the permit.	Rule 335-3-5-.03(1)
2.	The flares are subject to the requirements of ADEM Admin. Code r. 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
3.	The flares shall comply with the requirements specified in 40 CFR part 60, subpart A, "*General Provisions*" and as specified in this subpart of this permit.	40 CFR 60.18(b)
4.	The flares are used to comply with 40 CFR part 60, subpart KKK, "*Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants.*"	40 CFR 60.633(g)
5.	The flares shall comply with the requirements specified in 40 CFR part 63, subpart A, "*General Provisions*" and as specified in this subpart of this permit.	40 CFR 63.11(b)
6.	The flares are used to comply with 40 CFR part 63, subpart HH, "*National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.*"	40 CFR 63.771(d)(1)(iii) 40 CFR 63.772(e)(2)
5.	The flares are subject to 40 CFR part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of the permit.	40 CFR part 64
Emission Standards		
1.	All process gas containing greater than 0.10 grains of H_2S/scf shall be properly burned in the thermal oxidizer or the flares.	Rule 335-3-5-.03(1)

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
2. Each process gas stream containing more than 0.10 of a grain of hydrogen sulfide (H_2S) per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period.	Rule 335-3-5-.03(2)
(a) Each process gas stream that has to be vented to the atmosphere shall be captured and sent to the thermal oxidizer or to the facility flare for combustion.	
(b) Provided vessels or equipment are being de-pressured and/or emptied and the reduced pressure will not allow flow of the process gas stream to the combustion device, the venting to the atmosphere of any gas stream shall be allowed, but the duration of the venting shall not exceed 15 continuous minutes.	
(c) The hydrogen sulfide (H_2S) feed rate to the facility flare(s) shall not exceed 500 lb/hr.	
3. Provided the available sulfur is less than or equal to 5 long tons per day, there is no limit on sulfur dioxide emissions. A record of SO_2 emissions shall be kept for reporting purposes.	Rule 335-3-5-.03(3)
4. To demonstrate compliance with 40 CFR part 60, subpart KKK and 40 CFR part 63, subpart HH, the each flare shall meet the following requirements:	
(a) Be designed for and operated with no visible emissions, except for a 5-minute period during any consecutive 2-hour period	§60.18(c)(1) §63.11(b)(4)
(b) Operate with a flame present at all times	§60.18(c)(2) §63.11(b)(5)
(c) Be steam-assisted, air-assisted, or non-assisted	§60.18(c)(6) §63.11(b)(2)
(d) Operate at all times when emissions may be vented to it	§60.18(e) §63.11(b)(3)
(e) Adhere to the following:	§60.18(c)(3) §63.11(b)(6)

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
(1) Heat content specifications in §60.18(c)(3)(ii) and §63.11(b)(6)(ii) AND (2) Maximum tip velocity specifications in §60.18(c)(4) and §63.11(b)(7) or (8) OR (3) The requirements of §60.18(c)(3)(i) and §63.11(b)(6)(i)	
Compliance and Performance Test Methods and Procedures	
1. Compliance with the opacity standards shall be determined using Method 22 of 40 CFR part 60, appendix A.	§60.18(f)(1) §63.11(b)(4)
2. Compliance with proviso 4(e) of the *emission standards* section of this subpart shall be determined using the methods and procedures specified in 40 CFR 60.18(f)(3)-(6) and 40 CFR 63.11(b)(6)-(8).	§60.18(f)(3)-(6) §63.11(b)(6)-(8)
3. For the purpose of demonstrating compliance with provisos 1 through 3 of the *emission standards* section of this subpart, each process gas stream that can be sent to the flares shall be tested in accordance to the following requirements:	Rule 335-3-1-.05 Rule 335-3-16-.05(c)1.(i)
(a) The hydrogen sulfide (H_2S) content shall be determined by collecting a sample and analyzing it utilizing the Tutwiler procedures found in §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacture. [Stream H_2S (Mole %)]	
(b) The volatile organic compound (VOC) weight percent, Btu heat content, and molecular weight of each process stream shall be determined by collecting a sample and analyzing it utilizing ASTM Analysis Method D1826-77; chromatographic analysis procedures found in 40 CFR part 60, appendix A, Method 18 or equivalent methods and procedures. [Stream Molecular Weight (Mole Wt)] [Stream VOC Content (Wt %)]	

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
[Stream Heat Content (Btu/Scf)]	
4. The inlet feed volume to the facility flare(s) shall be continuously monitored.	
Emission Monitoring	
1. Opacity monitoring as specified in Appendix E, *"Opacity Monitoring for Facility Flares"* of this permit shall be utilized for the flares.	§60.18(f)(1)-(2) §63.11(b)(4)-(5)
2. Monitoring meeting the requirements specified in the Appendix C, "*Monitoring for Facility Flares*" of this permit shall be utilized for the flares.	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.(i) §64.6(b) & (c)
3. Each process stream that can be sent to the flare shall be monitored in accordance to the following requirements:	Rule 335-3-1-.05
(a) H_2S testing shall consist of capturing one representative sample of the stream at a frequency of no less than once each month.	
(b) The VOC weight percent, Btu content, and molecular weight of each process stream shall be determined by collecting a representative sample of the stream and analyzing it at a frequency of no less than once every twelve (12) months.	
(c) Provided multiple process streams can be sent to the flare and it is possible to capture a common stream whose contents would be representative of all the streams, that common stream may be used instead of the individual process streams.	
(d) The frequency of monitoring may be modified upon receipt of Department approval.	
Record Keeping and Reporting Requirements	
1. A monthly record of the following information shall be maintained and made available for inspection:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)2. §64.9

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations

(a) Volume of gas burned in flare

[Stream Volume (MScf/Month)]

(b) Stream Heat Input (MMBtu/Month) =

[Stream Volume (MScf/Month)] X [10^3 Scf/1 MScf)] X
[Stream Heat Content (Btu/Scf)] X [1 MMBtu/10^6 Btu)]

(c) Stream H_2S (Lbs/Month) =

[Stream Volume (MScf/Month] X [10^3 Scf/MScf)] X
[1 Mole/380 Scf] X [{ Stream (H_2S Mole %)}/{100}] X
[34 Lbs. H_2S/Mole H_2S]

(d) Flare H_2S Feed Rate (Lbs/Month) =

$\sum$ of Stream H_2S (Lbs/Month)

(e) Number of hours that the flare was operated during the month

[Flare Hours (Hours/Month)]

(f) Available sulfur (LTons/day) =

$$\frac{[\text{Stream } H_2S \text{ (Lbs/Month)}] \text{ X } \{1 \text{ LTon}/2{,}240 \text{ Lbs}\}}{[\text{Flare Hours (Hours/Month)}] \text{ X } \{1 \text{ day}/24 \text{ Hours}\}}$$

(g) H_2S feed (Lbs/Hour) =

$$\frac{\text{Flare } H_2S \text{ Feed Rate (Lbs/Month)}}{\text{Flare Hours (Hours/Month)}}$$

(h) Flare SO_2 Emissions (Lbs/Month) =

$$\frac{[\text{ Flare } H_2S \text{ Feed Rate (Lbs/Month) }] \text{ X } [\text{ 64 Lbs of } SO_2/\text{ Lb-Mole }] \text{ X } [\text{ 0.98 }]}{[\text{ 34 Lbs } H_2S/\text{Lb-Mole }]}$$

(i) Flare Heat Input (MMBtu/Month) =

$\sum$ of Stream Heat Input (MMBTU/Month)

(j) For the purpose of determining Title V emissions, the following emissions shall be calculated:

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
(1) Carbon monoxide (CO) and nitrogen oxide (NO_X) emissions shall be determined using the most recent emission factors (EF) found in AP-42 Section 13.5 and the following equation: Pollutant emissions (Lbs/Month) = EF (Lb/MMBtu) X Flare Heat Input (MMBtu/Month) (2) VOC emissions (Lbs/Month) = [Stream Volume (MScf/Month)] X {1 Lb-Mol/0.380 MScf) X Mole. Wt (VOC Lbs/Lb-Mol) X 0.02	
(k) Record of each daily visible emission observation conducted on the flares	
(l) The date, starting time, and duration of each deviation or exceedance of the requirements along with the cause and corrective actions taken.	
(m) The date, starting time, and duration of each time the H_2S feed rate exceeded 500 lb/hr, along with the cause and corrective actions taken.	
2. A monitoring report meeting the requirements specified in proviso 2(a) and (b) of this section of this subpart shall be submitted to the Department to demonstrate compliance with proviso 21(a) of the *General Provisos* subpart of this permit.	Rule 335-3-16-.05(c)3.(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any condition determined by observation, by data collected by any continuous monitoring system or periodic monitoring required by the permit that can be used to indicate compliance, that identifies an affected source may have failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.	
(b) Provided a continuous monitoring system is not being utilized, a Periodic Monitoring Report (PMR) meeting the requirements specified in the following provisos shall be submitted to the Department.	
(1) Except as provided for in proviso 1(c) of this section of this subpart, the report shall meet the requirements specified in proviso 2(b)(1)(i).	Rule 335-3-16-.05(c)2.
(i) For each deviation event, the following information shall be submitted.	
(I) Emission source description	
(II) Permit requirement	
(III) Date	
(IV) Starting time	
(V) Duration	
(VI) Actual quantity	
(VII) Cause	
(VIII) Action taken to return to compliance	
(IX) Total operating hours of the affected source during the reporting period	
(X) Total hours of deviation events during the reporting period	

Provisos for the Facility Flares

Federally Enforceable Provisos	Regulations
(XI) Total hours of deviation events that occurred during startups, shut downs, and malfunctions during the reporting period (2) Each PMR shall cover no more than a calendar semi-annual period and shall be submitted according to the following reporting schedule: Reporting Period — Submittal Date January 1st through June 30th — July 31st July 1st through December 31st — January 31st (c) The report content and format in proviso 2(b) of this section of this subpart may be modified upon receipt of Departmental approval.	
3. Each deviation from the *emission standards* section of this subpart, including those that occur during startups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the *General Provisos* subpart of this permit.	Rule 335-3-16-.05(c)3.(ii)

Summary Page for Storage Vessels I

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
Storage Vessels I **CST-1** **AND** **CST-2**	(2) 415,000 gallon Fixed Roof Condensate Storage Tanks	VOC	Reduce VOC emissions to atmosphere by at least 95% by weight	§60.110a(a) 40 CFR 60 Subpart K_a

Provisos for Storage Vessels I

Federally Enforceable Provisos	Regulations
Applicability	
1. The CST-1 and CST 2, Storage Vessel I, are subject to the applicable requirements of 40 CFR part 60, subpart K_a, "*Standards of Performance for Storage Vessels for Petroleum Liquids"* and the requirements of this section of this subpart.	Rule 335-3-10-.02(9)(a) 40 CFR 60.110a(a)
Emissions Standards	
1. Provided that the true vapor pressure of the petroleum liquid, as stored, is greater than or equal to 1.5 psia but not greater than 11.1 psia, the storage vessel shall be equipped with one of the following:	§60.112a(a)
(a) With an external, floating roof that meets the requirements as specified in §60.112a(a)(1) of subpart K_a	§60.112a(a)(1)
OR	
(b) With a fixed roof and an internal floating roof that meets the requirements specified in §60.112a(a)(2) of subpart K_a	§60.112a(a)(2)
OR	
(c) With an vapor recovery system that meets the requirements specified in §60.112a(a)(3) of subpart K_a.	§60.112a(a)(3)
OR	
(d) With a system equivalent to those described in either proviso 1(a), (b), or (c) of this section of this subpart that meets the requirements specified in §60.112a(a)(4) of subpart K_a.	§60.112a(a)(4)
2. Provided the true vapor pressure of the petroleum liquid, as stored, is greater than 11.1 psia, the storage vessel shall be equipped with a vapor recovery system that meets the requirements as specified in §60.112a(b) of subpart K_a.	§60.112a(b)

Provisos for Storage Vessels I

Federally Enforceable Provisos	Regulations
Compliance and Performance Test Methods and Procedures	
1. For the purpose of demonstrating compliance with the emission standards, the applicable test methods and procedures as specified in §60.113a(a)(1) of subpart K_a shall be complied with.	§60.113a(a)(1)
2. For the purpose of evaluating efficiency of the vapor recovery system prior to construction, the information in §60.113a(a)(2) of subpart K_a shall be provided to the Department.	§60.113a(a)(2)
Emission Monitoring	
1. Except that the storage tanks are equipped with a vapor recovery and return or disposal system, the monitoring requirements specified in §60.115a(a) shall be complied with.	§60.115a(a) §60.115a(d)(2)
Recordkeeping and Reporting Requirements	
1. Except that the storage tanks meet the exemptions specified in §60.115a(d)(1) or (d)(2) of Subpart K_a, the recordkeeping and reporting requirements as specified in §60.115a(a) of subpart K_a and as specified in §60.7(a) and (b) and §60.19 of subpart A shall be met.	§60.115a(d)(1) or (d)(2) §60.7(a) and (b) & §60.19

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Summary Page for Facility-wide Fugitive VOC Emissions

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission Point	Description	Pollutant	Emission Limit	Regulations
Fugitive Emissions	All affected facilities located at an onshore natural gas processing plant: Compressors, except reciprocating compressors in VOC or wet gas service Group of all equipment: Each valve Each pump Each pressure relief device Each open-ended valve or line Each flange or other connector Dehydration Units Sweetening Unit LNG Unit	Fugitive VOC	LDAR Program	§60.630 40 CFR 60 Subpart KKK

Individual Process Units :

Inlet Gather & Separation
Condensate Stabilization Unit
Sour Gas Sweetening Unit
Gas Dehydration Unit
NGL Extraction Unit
Closed Vent System
Salt Water Separation Unit
Fuel, Auxiliary & Utility System

Provisos for Facility-wide Fugitive VOC Emissions

Federally Enforceable Provisos	Regulations
Applicability	
1. Except as specified in 40 CFR 60.630(d), the affected facilities listed below are subject to the requirements found in 40 CFR part 60, subpart KKK, "*Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants".* Affected facilities under this subpart are as follows:	Rule 335-3-10-.02(63) 40 CFR 60.630(a)(1)
(a) Each compressor in VOC service or in wet gas service, except reciprocating compressors in wet gas service	§60. 630(a)(2) §60. 633(f)
(b) The group of all equipment within a process unit in VOC service or in wet gas service as specified in proviso 1(b)(1) through (5).	§60. 630(a)(3)
(1) Each pump	
(2) Each pressure relief device	
(3) Each open-ended valve or line	
(4) Each valve	
(5) Each flange or other connector	
(c) A compressor station, dehydration unit, sweetening unit, underground storage tanks, field gas gathering system, or liquefied natural gas units located at the Hatter's Pond Plant would also be covered under subpart KKK.	§60. 630(e)
Emissions Standards	
1. The emission standards as specified in either 1(a) or 1(b) shall be met to demonstrate compliance with this subpart.	§60.632(a) §60.482-1(a) §60.480(e)
(a) Except as specified in §60.633 of subpart KKK, each affected facility shall comply with the emission standards specified in the following provisos:	

Provisos for Facility-wide Fugitive VOC Emissions

Federally Enforceable Provisos		Regulations
(1)	Pumps in light liquid service shall comply with §60.482-2 of 40 CFR part 60, subpart VV, except as specified in §60.633(d) and (e) of subpart KKK.	§60.482-1(a) §60.482-2 §60.633(d) & (e)
(2)	Compressors shall comply with §60.482-3 of subpart VV, except as specified in §60.633(f) of subpart KKK.	§60.482-1(a) §60.482-3 §60.633(f)
(3)	Pressure relief devices in gas/vapor service shall comply with §60.482-4 of subpart VV, except as specified in §60.633 (b), (d), and (e) of subpart KKK.	§60.482-1(a) §60.482-4 §60.633(b), (d), & (e)
(4)	Sampling connection systems under subpart KKK are exempt from the requirements of §60.482-5 in subpart VV.	§60.633(c)
(5)	Open-ended valves or lines shall comply with §60.482-6 of subpart VV.	§60.482-1(a) §60.482-6
(6)	Valves in gas/vapor service and in light liquid service shall comply with 60.482-7 of subpart VV, except as specified in §60.633(d) and (e) of subpart KKK.	§60.482-1(a) §60.482-7 §60.633(d) & (e)
(7)	Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors shall comply with §60.482-8 of subpart VV.	§60.482-1(a) §60.482-8
(8)	Delay of repair requirements in §60.482-9 of subpart VV shall be complied with.	§60.482-1(a) §60.482-9
(9)	Closed vent systems and control devices shall comply with §60.482-10 of subpart VV.	§60.482-1(a) §60.482-10
	(i) A flare used to meet any of the above requirement shall comply with the requirements specified in §60.18 of 40 CFR part 60, subpart A.	§60.633(g)

Provisos for Facility-wide Fugitive VOC Emissions

Federally Enforceable Provisos	Regulations
(b) As an alternative means of compliance, the provisions of 40 CFR part 65, subpart F may be complied with to satisfy the requirements of §60.482 through §60.487 of subpart VV for an affected facility.	§60.480(e) §60.482-1(a)
2. Equipment that is in vacuum service is excluded from the requirements of §60.482-2 through §60.482-10 of subpart VV if it is identified as required in §60.486(e)(5) of subpart VV.	§60.632(a) §60.482-1(d) §60.486(e)(5)
3. An owner or operator may elect to comply with the alternative standards for valves specified in §60.483-1 or 60.483-2 of subpart VV.	§60.632(b)
4. An owner or operator may apply for permission to use an alternative means of emission limitations as specified in §60.634 of subpart KKK to satisfy the requirements of §60.482 through §60.487 of subpart VV for an affected facility.	§60.632(c) §60.634
Compliance and Performance Test Methods and Procedures	
1. Except as specified in §60.633(h) of subpart KKK, compliance with §60.482-1 to §60.482-10 of subpart VV shall be determined by the review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485 of subpart VV.	§60.632(d) §60.633(h) §60.482-1(b) §60.485
Emission Monitoring	
1. The inspection and monitoring requirements specified in §60.482-1 through §60.482-10 of subpart VV and either §60.483-1 or §60.483-2 of subpart VV shall be complied with.	§60.632(a) & (b)
Recordkeeping and Reporting Requirements	
1. Recordkeeping and reporting requirements specified in §60.7 and §60.19 of subpart A and §60.486 and §60.487 of subpart VV shall be maintained, except as provided for in §60.633, §60.635, and §60.636 of subpart KKK.	§60.7, §60.19 §60.632(e), §60.633 §60.635, §60.636 §60.486, §60.487

Provisos for Facility-wide Fugitive VOC Emissions

Federally Enforceable Provisos	Regulations
2. A Leak Detection and Repair (LDAR) summary report shall be submitted to the Department:	§60.636(c) §60.486 §60.487(c)
(a) The report shall include the requirements specified in §60.636(c) and a summary of the recordkeeping requirements found in §60.486 as specified in §60.487(c).	
(b) The report shall cover a calendar semi-annual period and shall be submitted to the Department on the following reporting schedule:	

Reporting Period	Submittal Date
January 1st through June 30th	July 31st
July 1st through December 31st	January 31st

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Summary Page for Facility-wide VHAP Emissions

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission limitations:

Emission Point	Description	Pollutant	Emission Limit	Regulations
Oil and Natural Gas Production Facilities				
All sources within a contiguous area and under common control which emits or may emit hazardous air pollutants.		VHAP	Less than or equal to 9.9 tons per year (TPY) for individual HAP AND Less than or equal to 24.9 TPY for all HAPs	§63.2 40 CFR 63 Subpart HH MACT Avoidance for Major Source of HAPs
Affected Facility: Tri-ethylene Glycol (TEG) Dehydration Unit [In Urban-1 County with UA plus offset and UC boundary]		Benzene	<0.9 megagrams per year (~1 TPY)	§63.764(e)(ii) 40 CFR 63 Subpart HH MACT Avoidance for Major Source of HAPs

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
Applicability	
1. Four Star has requested a facility-wide emission limit for the plant to allow it to be an area source of Hazardous Air Pollutants (HAPs).	§63.2
2. The tri-ethylene glycol (TEG) dehydration unit is an affected source subject to the applicable requirements of 40 CFR part 63, subpart HH, *"National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities"* for an Area Source of HAPs and the requirements of this subpart of this permit.	§63.760(a)(1) §63.760(b)(2)
3. The TEG dehydration unit located at this facility is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *Major Source Operating Permits* and the requirements of this subpart of this permit.	Rule 335-3-16-.03
Emissions Standards	
1. The facility-wide hazardous air pollutant (hereafter called HAP) emissions shall not exceed 9.9 tons during any twelve (12) consecutive month period for each pollutant specified in proviso 1(a) through (g): (a) Benzene (b) Ethyl benzene (c) Toluene (d) Xylene (e) n-Hexane (f) Methanol (g) Formaldehyde	§63.2 Area Source Limit
2. The total facility-wide hazardous air pollutant (hereafter called THAP) emissions shall not exceed 24.9 tons during any twelve (12) consecutive month period for the total of all pollutants specified in proviso 1 of this section of this subpart.	§63.2 Area Source Limit

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
3. The actual average emissions of benzene from the TEG dehydration unit process vent to the atmosphere shall be maintained at less than 0.90 megagrams per year.	§63.764(e)(1)(ii)
(a) All emissions from the TEG dehydration unit process vent shall be routed through a closed vent system to the facility flare for combustion or routed back through the process.	§63.765(b)(1)(i) §63.771(d)(1)(iii)
(1) A flare used as a control device to demonstrate compliance with subpart HH shall be designed and operated according to the requirements of §63.11(b) and as specified in the Facility Flares subpart of this permit.	§63.11(b)
Compliance and Performance Test Methods and Procedures	
1. Compliance with proviso 1 and 2 of the *emissions standards* section of this section of this subpart shall be met as follows:	Rule 335-3-1-.05 Rule 335-3-16-.05(c)1.
(a) The fuel gas shall be analyzed for its Btu heat content utilizing ASTM Analysis Method D1826-77 or equivalent methods and procedures. [Fuel Gas (Btu/Scf)]	
(b) A compositional gas analysis shall be performed on the following gas streams to determine the HAP concentration of the gas stream:	
(1) Acid gas entering the thermal oxidizer shall be tested for each HAP specified in proviso 1(a) through (e) of the *emission standards* section of this subpart. [Acid Gas HAP (ppmv)]	
(2) Gas entering the glycol-contacting tower or the glycol leaving and entering the contacting tower shall be tested for each HAP specified in proviso 1(a) through (f) of the *emission standards* section of this subpart. [Dehydrator HAP (ppmv)]	
(c) Monthly HAP emissions from the sources specified in provisos 1(c)(1) through (4) of this section of this subpart shall be determined in accordance to the specified requirements.	

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations

(1) Fuel gas combustion device HAP emissions shall be determined in accordance with the following methods and procedures:

(i) While utilizing the consumption rate of either an individual fuel gas combustion device or a combination of fuel gas combustion devices

AND

(ii) The fuel gas Btu content

AND

(iii) The HAP pollutant emission factors (Lbs/MMBtu) found in the latest stack test for the make and model of combustion device, the latest EPA "AP-42" publication, GRI-HAPCalc™ Version 3.0 or greater, GRI-HAPData™ Version 1.0 or greater or other Departmental approved sources.

(iv) Emission estimates may be made on an individual combustion device basis or on any combination of combustion devices that have the same emission factors.

(2) Thermal oxidizer HAP emissions shall be determined in accordance with the following methods and procedures:

(i) While utilizing the flow rate of the acid gas entering the thermal oxidizer

AND

(ii) The acid gas HAP (ppmv)

AND

(iii) The molecular weight of the individual HAP pollutant.

AND

(iv) Either a control efficiency assumption of

(I) 98% if controlled by a combustion device.

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations

OR

(II) 95% if controlled by a condensing device.

(3) Gas dehydration unit HAP emissions shall be determined in accordance with the following methods and procedures:

(i) While utilizing the latest stack test, GRI-GLYCalc™ Version 3.0 or greater computer model or other Departmental approved sources.

AND

(ii) Dehydrator HAP (ppmv)

AND

(iii) Dehydrator Feed (Scf/Month)

AND

(iv) Either a control efficiency assumption of

(I) 98% if controlled by a combustion device.

OR

(II) 95% if controlled by a condensing device.

(4) Equipment fugitive HAP emissions shall be determined in accordance with the following methods and procedures:

(i) HAP emissions shall be determined in accordance with the methods and procedures specified in the latest EPA protocol (i.e. EPA-453/R-95-017 document) for making such estimates and as speciated relative to the HAP composition of the respective process stream.

OR

(ii) HAP emissions shall be calculated utilizing the most current AP-42 factors.

OR

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
(iii) HAP emissions shall be calculated utilizing any other method required or allowed by the Department.	
2. Compliance with proviso 3 of the *emissions standards* section of this section of this subpart shall be met by:	
(a) Determining the benzene emissions, either uncontrolled or with federally enforceable controls in place, using one of the following methods:	§63.772(b)(2)
(1) Determine the actual average benzene emissions using the model GRI-GLYCalc, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc Technical Reference Manual.	§63.772(b)(2)(i)
OR	
(2) Determine an average mass rate of benzene emissions in kilograms per hour (kg/hr) through direct measurement using one of the following methods:	§63.772(b)(2)(ii)
(i) Method 18 of 40 CFR part 60, appendix A	§63.772(a)(1)(i)
OR	
(ii) ASTM D6420-99 (2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference- see §63.14)	§63.772(a)(1)(ii) §63.14
OR	
(iii) An alternative method according to §63.7(f)	§63.7(f)
(b) If a flare is used to demonstrate compliance with subpart HH, Method 22 of 40 CFR part 60, appendix A shall be used to determine visible emissions.	§63.11
Emission Monitoring	
1. To demonstrate compliance with the emission limitations specified in proviso 1 and 2 of the *emissions standards* section of this subpart, the following monitoring requirements shall be met:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)1.

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
(a) For combustion devices, the fuel gas Btu heat content shall be determined on monthly basis using the methods and procedures specified in proviso 1a of the *compliance and performance test methods and procedures* section of this subpart.	
(b) Each process stream shall be tested for its HAP content in accordance to the following requirements:	
(1) Each test shall consist of capturing three (3) grab samples within at least a thirty (30) minute interval between samples.	
(2) The HAP concentration shall be the arithmetic average of the individual analytical results obtained during each test.	
(3) A test shall be conducted on each stream at least once every six months (semi-annually).	
(i) Provided at least six semi-annual tests analysis have been undertaken, future tests may be conducted on each stream at least once every twelve (12) months upon receipt of Departmental approval.	
(ii) The Department reserves the right to require more frequent tests.	
(c) A test may be conducted any time between fifteen days prior to and up to fifteen days after the ending date of the respective time interval for conducting the test.	
(d) Periodic monitoring in the form of the recordkeeping found in proviso 1 of the *recordkeeping and reporting requirements* section of this subpart of the permit shall be met.	
2. To demonstrate compliance with proviso 3 of the *emissions standards* section of this subpart, the following monitoring requirements shall be met:	
(a) Meeting the monitoring for the flare specified in Appendix E *Monitoring for Facility Flares* to demonstrate the presence of a flame or spark at the flare tip.	§63.11(b)(4)-(5)

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
Recordkeeping and Reporting Requirements	
1. To demonstrate compliance with the requirements specified in proviso 1 and 2 of the *emission standards* section of this permit, records of the following information and calculations shall be maintained:	Rule 335-3-1-.04 Rule 335-3-16-.05(c)2.
(a) Monthly consumption or feed volumes of the streams specified in proviso 1(a)(1) through (3) of this section of this subpart shall be obtained.	
(1) Combustion Device(s) Fuel Gas Consumption [Fuel Gas (Scf/Month)]	
(i) Consumption volumes may be measured on an individual fuel gas combustion device (i.e. boiler, heater & engine) basis or on any combination of fuel gas combustion devices that have the same emission factors.	
(2) Acid gas flow entering thermal oxidizer [Acid Gas (Scf/Month)]	
(i) Shall consist of the accumulation of the volume of gas entering the thermal oxidizer from the treating unit over a period of time.	
(3) TEG dehydration unit feed [TEG Feed (Scf/Month)]	
(i) Shall consist of the accumulation of the volume of gas entering the contacting tower of the dehydration unit over a period of time.	
(b) Monthly Fuel Gas Btu Heat Content [Btu Content (Btu/Scf)]	
(c) Monthly HAP Emissions shall be calculated as follows:	

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations

(1) Fuel Gas Combustion Device HAP emission shall be determined using the methods and procedures specified in proviso 1(c)(1) of the *compliance and performance test methods and procedures* section of this subpart of this permit and in conjunction with the following equations:

(i) Fuel Combustion Device HAP Emissions (Lbs/Month) =

$$\frac{[\{\text{Fuel Gas (Scf/Month)} \times \text{Fuel Gas (Btu/Scf)}\} \times \{\text{HAP EF (Lbs/MMBtu }\}]}{[\ 10^6 \text{ Btu/MMBtu }]}$$

(ii) Fuel Combustion Device HAP Emissions (Tons/Month) =

Fuel Combustion Device HAP Emissions (Lbs/Month) X (1 Tons/2,000 Lbs)

(2) The thermal oxidizer HAP emissions shall be determined using the methods and procedures specified in proviso 1(c)(2) of the *compliance and performance test methods and procedures* section of this subpart of this permit and in conjunction with the following equations:

(i) Thermal Oxidizer HAP Emissions (Lbs/Month) =

$$\frac{[\{\text{Acid gas (Scf/Month)}\} \times \{\text{Acid gas HAP (ppmv)}\} \times \{\text{HAP Lbs/Lb. Mole}\} \times \{1.0 - \text{Eff.}\}]}{[\ 380 \text{ Scf/Lb. Mole }] \times [\ 10^6 \text{ ppmv}]}$$

(ii) Thermal Oxidizer HAP Emissions (Tons/Month) =

Thermal Oxidizer HAP Emissions (Lbs/Month) X (1 Tons/2,000 Lbs)

(3) The dehydrator HAP emissions shall be determined using the methods and procedures specified in proviso 1(c)(3) of the *compliance and performance test methods and procedures* section of this subpart of this permit and in conjunction with the following equation:

(i) Glycol Dehydrator HAP Emissions (Tons/Month) =

Glycol Dehydrator HAP Emissions (Lbs/Month) X (1 Tons/2,000 Lbs)

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
(4) Equipment fugitive HAP emissions shall be determined using the procedures specified in proviso 1(c)(4) of the *compliance and performance test methods and procedures* section of this subpart of this permit and in conjunction with the following equation: (i) Equipment Fugitive HAP Emissions (Tons/Month) = Equipment Fugitive HAP Emissions (Lbs/Month) X (1 Tons/2,000 Lbs)	
(d) Monthly HAP and THAP emissions for the entire plant shall be calculated by accumulating the HAP emissions determined in proviso 1(c)(1) through (4) of this section of this permit.	
(e) Twelve (12) consecutive month HAP and THAP emissions for the entire plant shall be calculated by accumulating the current monthly emissions determined in proviso 1(c)(1) through (4) of this section of this subpart along with the previous eleven month's estimate.	
(1) Provided at least twenty four (24) monthly emission estimates have been obtained, the month in which to make the new emission estimates may be modified to every third month (quarterly) upon receipt of Departmental approval.	
(2) Provided at least twelve quarterly emission estimates have been obtained, the month in which to make the new emission estimates may be modified to every sixth month (semi-annual) upon receipt of Departmental approval.	
2. To demonstrate compliance with proviso 3 of the *emission standards* section of this subpart of the permit, the following records shall be maintained:	
(a) Records of the actual average benzene emissions in tons per year as determined in accordance with §63.772(b)(2).	§63.774(d)(1)(ii)
(b) Monthly record of the operating hours for the TEG dehydration unit	Rule 335-3-1-.04

Provisos for Facility-wide VHAP Emissions

Federally Enforceable Provisos	Regulations
3. The facility shall submit a copy of the benzene emissions (megagrams/year) from the TEG dehydration unit process vent to the Department as part of the Title V emission estimates.	Rule 335-3-16

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Appendix A: Monitoring for Engines with Catalytic Converters

Each Engine w/Catalytic Converter

Monitoring approach:	*Compliance Assurance Monitoring (CAM)/Periodic Monitoring (PMR) — Choose at least one:*		
I. Indicator	**Pressure drop across the catalyst bed**	**Temperature drop across the catalyst bed**	**NO_X concentrations in the exhaust gas**
A. Measurement approach	Pressure differential will be obtained by observing and recording the pressure immediately upstream and downstream of the catalyst bed.	Temperature differential will be obtained by observing and recording the temperature immediately upstream and downstream of the catalyst bed.	NO_X concentrations will be obtained by using a portable monitor to analyze the gases downstream of the catalytic converter.
II. Indicator range	**Pressure differential shall not exceed the manufacturer's maximum recommended pressure differential that indicates sufficient catalyst performance.**	**Temperature differential shall not exceed the manufacturer's maximum recommended temperature differential that indicates sufficient catalyst performance.**	**NO_X concentrations in the catalytic converter exhaust gas shall not exceed the NO_X concentrations from the latest performance test.**
	A deviation is defined as anytime the pressure differential exceeds the recommended pressure differential.	A deviation is defined as anytime the temperature differential exceeds the recommended temperature differential.	A deviation is defined as anytime the NO_X concentration exceeds the concentration from the latest performance test.
	A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.	A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.	A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.
A QIP threshold	If more than 5 deviations occur during any semi- annual reporting period, a Quality Improvement Plan shall be developed and implemented to ensure sufficient future catalyst performance for engines subject to CAM.	If more than 5 deviations occur during any semi- annual reporting period, a Quality Improvement Plan shall be developed and implemented to ensure sufficient future catalyst performance for engines subject to CAM.	If more than 5 deviations occur during any semi- annual reporting period, a Quality Improvement Plan shall be developed and implemented to ensure sufficient future catalyst performance for engines subject to CAM.

III. Performance criteria			
A. Data representiveness	Pressure monitors shall be placed upstream and downstream of the catalyst bed.	Temperature monitors shall be placed upstream and downstream of the catalyst bed.	The portable monitor calibration gas used shall have concentrations that are: (1) Greater than or equal to 150% of, AND (2) Less than or equal to 10% of, AND (3) Approximately equal to, the concentrations obtained from the last performance test. The portable monitor must be capable of less than 5% error when compared to the calibration gases.
B. Verification of operational status	Not applicable	Not applicable	Not applicable
C. QA/QC practices & criteria	The pressure monitors shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually whichever is more frequent.	The temperature monitors shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually whichever is more frequent.	Should the portable monitor exceed the 5% error margin, it shall be taken out of service until it is either repaired, replaced, or passes a new calibration test.
D. Monitoring frequency	Pressure differential shall be monitored weekly.	Temperature differential shall be monitored weekly.	NO_X concentration shall be monitored weekly or as specified in the engine section.
Data collection procedure	Record: Weekly Pressure differential Record: Each occurrence Time, date and results of each inspection and corrective actions taken	Record: Weekly Temperature differential Record: Each occurrence Time, date and results of each inspection and corrective actions taken	Record: Weekly NO_X concentration Record: Each occurrence Time, date and results of each inspection and corrective actions taken
Averaging period	Not applicable	Not applicable	Not applicable

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Appendix B: Monitoring for Thermal Oxidizer

Thermal Oxidizer Monitoring

Monitoring approach:	*Periodic Monitoring*	*Compliance Assurance Monitoring (CAM)*
I. Indicator	**H_2S feed rate**	**Firebox temperature**
A. Measurement approach	Inlet feed volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculation or estimated utilizing material balances, computer simulations, special testing and etc. Inlet feed analyzed monthly for its H_2S content.	Firebox temperature shall be monitored with a thermocouple or equivalent device.
II. Indicator range	**H_2S feed rate of <= 500 Lbs/Hr, or as set by the Department**	**Firebox temperature shall be maintained at ≥ 900 °F or the firebox temperature utilized during the latest stack test which indicated compliance when an acid gas stream can be sent to the thermal oxidizer.**
	A deviation is defined as anytime the daily H_2S feed rate is > 500 Lbs/Hr.	A deviation is defined as anytime the firebox temperature is less than 900 °F or the firebox temperature utilized during the latest stack test when an acid gas stream can be sent to the thermal oxidizer.
	A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.	A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.
A QIP threshold	If more than 6 deviations occur during any semi-annual reporting period, the maximum mass emission rate and associated flow rate criteria shall be utilized in an air quality modeling study determine if an exceedance occurred and a Quality Improvement Plan (QIP) shall be developed and implemented.	If more than 6 deviations occur during any semi-annual reporting period, determination shall be made of the oxidation efficiency that resulted from the lowest temperature event and the resultant data utilized in an Air quality modeling study to determine if an exceedance occurred and a Quality Improvement Plan shall be developed and implemented.
III. Performance criteria		
A. Data representiveness	Each volume monitor shall be located upstream of the thermal oxidizer and shall consist of a single device that monitors all streams or multiple devices that monitor individual or multiple streams.	Each temperature monitor shall be located within the combustion chamber or immediately downstream of the combustion chamber.

	The volume sensor shall be accurate to within 2% of span or 5% of design flow rate. The sample point for H_2S content shall be located downstream of where the various gas processing streams combine prior to entry into thermal oxidizer.	The sensor shall be accurate to within 5% of temperature measured.
B. Verification of operational status	Not applicable	Not applicable
C. QA/QC practices & criteria	Each volume monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually whichever is more frequent. If the monitor fails its calibration tests, the monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.	Each temperature monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately. If the monitor fails its calibration tests, the monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.
D. Monitoring frequency	Inlet volume measured continuously. Inlet feed H_2S content sample obtained and analyzed once each month.	Continuously
Data collection procedure	Calculate &/or record an inlet volume that is representative of the average daily volume entering thermal oxidizer. Record daily hours of operation Record each H_2S concentration analysis. Calculate & record H_2S and SO_2 emissions each day. Record calibration results. Record inspection results, and corrective actions taken.	Recorded once each day. Record calibration results. Record inspection results, and corrective actions taken.
Averaging period	24 hours	Instantaneous

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Appendix C: Monitoring for Facility Flares

Each Facility Flare

Monitoring approach:	*Periodic Monitoring*	*Compliance Assurance Monitoring (CAM)*
I. Indicator	**H_2S feed rate**	**Operate flare with a flame or spark present at all times when a process gas stream may be sent to it. [§60.18(c)(2) & §63.11(b)(3))]**
A. Measurement approach	Inlet feed volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculations or estimated utilizing material balances, computer simulations, special testing, etc. Inlet feed analyzed monthly for its H_2S content. Frequency may be modified upon receipt of Departmental approval.	The flare tip shall be equipped either with a continuous sparking flame igniter that is monitored by an amp meter OR an equivalent device OR visual observation *OR* with a continuously burning pilot light that is monitored with either a thermocouple or an equivalent device or by visual observation.
II. Indicator range	**H_2S feed rate <= 500 Lbs/Hr** A deviation is defined as anytime the average H_2S feed rate is > 500 Lbs/Hr. Two deviations within a semi- annual period triggers an immediate running of an air quality modeling study that utilizes the maximum inlet mass and flow rates that occurred during this period. The maximum feed rate may be modified upon receipt of Departmental approval.	**Presence of a flame or spark at flare tip** A deviation is defined as when there was no spark or flame present at the flare tip when a process gas stream could be vented to it. A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.
A QIP threshold	Not applicable	If more than 6 deviations occur during any semi-annual reporting period, a Quality Improvement Plan (QIP) shall be developed and implemented.
III. Performance criteria		
A. Data representiveness	Each volume monitor shall be located upstream of the flare and shall consist of a single device that monitors all streams or multiple devices that monitor individual or multiple streams. The sample point for obtaining the H_2S content shall be located at or upstream of each volume monitor.	Each flame igniter or flame monitor shall be located at the flare tip and focused on the area where gas exits the flare tip. Visual observations shall be made from the location that provides the best view of the flare tip and/or flare pilot lights or flare igniter.

B. Verification of operational status	Not applicable	Not applicable
C. QA/QC practices & criteria	Each volume monitor shall be maintained and calibrated in accordance with the manufacturer's specifications.	Each flame igniter or flame monitor shall be maintained and calibrated in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is properly maintained and calibrated accurately, or at least annually whichever is more frequent. Repairs and/or replacements shall be made immediately when non-functioning or damaged parts are found. Flame igniter arc length shall not exceed 10%of arc interval and shall have an arcing frequency of no greater than once every 3 seconds.
D. Monitoring frequency	Inlet volume shall be measured continuously. Inlet feed H_2S content sample obtained and analyzed once each month.	Pilot flame shall be monitored either continuously with a thermocouple or daily with visual inspections if operating staff is on site. Flame igniter - arcing frequency shall be monitored either continuously with an amp meter or daily with visual inspections if operating staff is on site.
Data collection procedure	Calculate &/or record an inlet volume that is representative of the average daily volume entering the flare. Record daily hours of operation. Record each H_2S concentration analysis. Calculate & record H_2S feed. Record time, date and results of each calibration. Record time, date and results of each inspection and corrective actions taken. Submit air quality modeling results to the Department within 60 days of the end of the semi-annual period.	Record time, date and duration of each incident of when no spark or flame was present at the flare tip when a process gas stream could have been sent to it. Record time, date and results of each visual observation. Record time, date and results of each calibration. Record time, date and results of each inspection and corrective actions taken.
Averaging period	Monthly	Instantaneous

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Appendix D: Opacity Monitoring for Units Subject to State Rule

Units Subject to Opacity Standard

Monitoring approach:	*Periodic Monitoring*
I. Indicator	**Opacity**
A. Measurement approach	Provided the emission source referred to in the unit specific section is being operated, a daily visual inspection of the unit shall be conducted during daylight hours for the presence or absence of visible emissions. A daily visual inspection is not required during periods that the production facility is unmanned by plant personnel, when a process stream is not being sent to the thermal oxidizer, or when any of the other units subject to the state opacity standard are not being operated. If visible emissions, in excess of the opacity standards, are observed at any time while the emission source is operating, a visible emissions observation (VEO) shall be performed that meets the following requirements: o Duration of each observation shall be >= 15 minutes AND <= 60 minutes o Each observation shall be conducted in accordance to either: Test Method 9 of 40 CFR Part 60 - Method 9 shall only be performed by an individual certified in using that method OR Test Method 22 of 40 CFR Part 60
II. Indicator range	An exceedance is defined as anytime the observed 6-minute average opacity exceeds 20% for the 2nd time when utilizing Method 9. An exceedance is defined as anytime the observed 6-minute average opacity exceeds 40% for the 1st time when utilizing Method 9. A deviation is defined as anytime the accumulated time in which visible emissions were observed exceeds 12 minutes per observation when utilizing Method 22. A deviation or exceedance triggers continued visible emissions observations at a frequency suitable to defining the emission deviation or exceedance event. One observation shall be undertaken to establish the end of the visible emission deviation event. A deviation or exceedance triggers an inspection, corrective action, and immediate reporting within 48 hours or two work days.
III. Performance criteria	
A. Monitoring frequency	Daily visual inspection of each unit; Each occurrence of a VEO being performed
Data collection procedure	Record: Time and date of each daily visual inspection of each unit subject to the state opacity standards Time, date, and duration of each occurrence when a VEO was performed on the flare or thermal oxidizer Each 15 second observation reading for the VEO Each occurrence of VEO Time, date and results of corrective actions taken
Averaging period	Six minutes

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Appendix E: Opacity Monitoring for Facility Flares

Opacity for the Facility Flares

Monitoring approach:	*Periodic Monitoring*
I. Indicator	**Opacity for Facility Flares (FF & BFF) [§60.18(c)(1) & §63.11(b)(4)]**
A. Measurement approach	Provided either (or both) facility flare(s) is (are) being operated and a gas stream other than the pilot light fuel gas stream is being sent to the flare, a visual emission observation shall be undertaken daily, or at a frequency approved by the Department. Duration of each observation shall be >= 15 minutes AND <= 120 minutes Each observation shall be conducted in accordance to Test Method 22 of 40 CFR Part 60
II. Indicator range	**Visible emissions observed for less than 5 minutes within a consecutive 2-hour period** A deviation is defined as anytime opacity is observed for more than 5 minutes over a consecutive 2-hour period when utilizing Method 22 A deviation triggers continued visible emissions observations at a frequency suitable to defining the emission deviation event. One observation shall be undertaken to establish the end of the visible emission deviation event. A deviation or exceedance triggers an inspection, corrective action, and immediate reporting within 48 hours or two work days.
III. Performance criteria	
A. Monitoring frequency	Daily, or as set by the Department
Data collection procedure	Record: Daily, or as set by the Department Each 15 second observation reading Record: Each occurrence Time, date and results of corrective actions taken
Averaging period	Not applicable